

PERFORMANCE MODELING BASED UPON EMPIRICAL MEASUREMENTS OF SYNCHRONIZATION POINTS

ABSTRACT

One embodiment of the present invention provides a system that uses empirical measurements of accesses to synchronization points within an application to construct a performance model for the application. This system operates by modifying the application to record statistics related to the synchronization points within the application. The system then runs the application to produce the statistics related to the synchronization points. Next, the system constructs the performance model based upon the statistics, and then uses the performance model to predict a performance of the application. Through use of such a performance model, bottlenecks can be identified and strategies to alleviate the bottlenecks can be devised. Furthermore, experiments can be performed on the model in order to select an optimum strategy for implementation.